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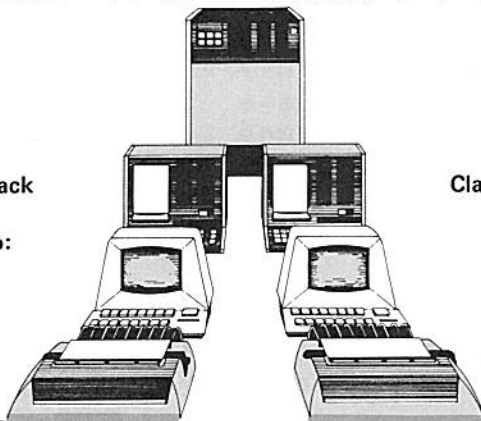
BENCHMARKS Reader/User feedback
is encouraged.

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SUBSCRIPTION A MUST FOR BENCHMARKS

In order to facilitate the distribution of BENCHMARKS, it has become necessary to require people to subscribe to it, free of charge. This has become a necessity due to the inefficiency of the distribution methods used in the past in terms of target populations. People who needed and wanted to read BENCHMARKS were not getting access to it, and vice versa. A subscription form is found in the back of this issue, and all non-subscribers are urged to sign up.

COMPUTING CENTER WORKSHOPS AND SHORT COURSES

Due to the success of the short courses offered by Academic Computing Services in September, another series of courses are being offered in October. This series is scheduled for the week of October 26, and is a repeat of the sessions held in September.

Graduate students are particularly encouraged to take heed of this notice. If you are a graduate student and intend to use the computing facilities in courses, or for thesis or dissertation projects, you should learn the rudiments of computer use--you should become minimally literate with respect to computers. Please pass this information on. The course schedule is as follows:

Title	Day	Date	Location	Time
Introduction to SPSS	Mon./Wed.	10/26, 10/28	GAB 206	1-3 PM
Introduction to SAS	Tu./Thur.	10/27, 10/29	LANG 104	1-3 PM
Introduction to MUSIC	Wed.	10/26	ISB 231	7-9 PM

A registration form is located at the back of this issue of BENCHMARKS and should be completed and returned IMMEDIATELY if you wish to attend any of these sessions (copy the form and pass it on to a friend, if you like). If you have further questions or suggestions, please call us at (817) 788-2324, or send MAIL to the SYSTEM (see the June 1981 BENCHMARKS for more information on sending Mail).

NEW TAPE DRIVES

On September 23, the Computing Center installed four new National Advanced Systems (NAS) tape drives. New features of these drives include higher speed (1200k bytes/sec compared to 360kb) and increased data density. The configuration consists of 3 drives capable of reading/writing at 6250 bpi and 1600 bpi (bits per inch) and one unit capable of 800 bpi and 1600 bpi processing. The consequence of the higher density is that, depending on the block size of the data being written, up to 4 times as much data may be placed on the same amount of tape. Due to improved technology, these new drives should provide much improved reliability, resulting in fewer tape errors and less down time.

The rest of this article notwithstanding, it should be noted that MOST USERS WILL HAVE TO MAKE NO CHANGES TO THEIR CURRENT JOBS in order to successfully use the new tape drives. However, ALL TAPE USERS SHOULD READ THE FOLLOWING INFORMATION in order to insure satisfactory use of the new tape drives and to avoid the unintentional continuance of creating 1600 bpi density tapes. It is recommended that anyone creating a tape with the intention of distributing it to another installation check with the target installation first to make sure of their capabilities regarding tape density.

JCLUNIT Parameter

Use UNIT=TAPE9 for tapes to be read or written at 1600 bpi or at 6250 bpi. Use UNIT=TAPEDD or UNIT=TAPE800 for tapes to be read or written at 800 bpi. Note that this is NO change from the past usage, except for the addition of TAPE800 for 800 bpi.

JOB CLASS

Continue to use CLASS=B for 1-tape jobs (1600 or 6250) and CLASS=I for 2-tape jobs or when using UNIT=TAPEDD (800 bpi). Use CLASS=C for 3-tape jobs (which should be used only as a last resort).

DEN Parameter (of the DCB Field)

On output tapes: (ignored on input tapes)

The DEN parameter in the DCB field is required in order to write at 800 bpi on the 800/1600 drive or to write at 1600 bpi on the 1600/6250 drives. (The default if DEN is omitted is to use the highest density available on the drive.)

The following values may be used:

DEN=2	800 bpi
DEN=3	1600 bpi (default on the 800/1600 drive)
DEN=4	6250 bpi (default on 1600/6250 drives)

Example: DCB=(DEN=2,RECFM=FB,...)

Note in particular that if you have not been using the DEN parameter, you will now be writing at 6250 bpi instead of at 1600 (very desirable in most cases). Also, if you are currently specifying DEN=3, you should now normally use DEN=4 (or simply omit DEN) in order to take advantage of the higher density.

Utility Control Cards

Some utility programs (for example IEHPROGM and IEHMOVE) require a parameter of the form 'VOL=device=serial' or 'TO=device=list' or something similar. The following should be used in the 'device' portion of these control cards.

<u>device</u>	<u>description</u>
3400-3	tape unit having 1600 bpi capability
3400-4	tape unit having 800 & 1600 capability
3400-5	tape unit having 6250 bpi capability
3400-6	tape unit having 1600 & 6250 bpi capability

In most cases, you should specify 3400-6 when using UNIT=TAPE9 or 3400-4 when using UNIT=TAPEDD. Using other values, or using these incorrectly, may lead to unpredictable results, including a job running sometimes and failing other times. This particularly applies to data sets catalogued as 3400-3 (or 2400-3) and actually written at 6250.

Some typical DD statements for tape input/output are reproduced below:

INPUT

a) Taking advantage of all the defaults, 1600 or 6250 bpi tape :

```
//IN DD UNIT=TAPE9,DISP=OLD,VOL=SER=ABCDEF,LABEL=(,SL),  
// DSN=OLD.DATA
```

b) Reading an 800 bpi tape :

```
//IN DD UNIT=TAPEDD,DISP=OLD,VOL=SER=ABCDEF,LABEL=(,SL),  
// DSN=OLD.DATA  
  
or  
//IN DD UNIT=TAPE800,DISP=OLD,VOL=SER=ABCDEF,LABEL=(,SL),  
// DSN=OLD.DATA
```

OUTPUT

a) Taking advantage of all the defaults, 6250 bpi tape :

```
//OUT DD UNIT=TAPE9,DISP=(NEW,KEEP),VOL=SER=ABCDEF,  
// LABEL=(1,SL),DSN=NEW.DATA,DCB=(RECFM=U,BLKSIZE=4000)
```

b) Writing a 1600 bpi tape :

```
//OUT DD UNIT=TAPE9,DISP=(NEW,KEEP),VOL=SER=ABCDEF,  
// LABEL=(1,SL),DSN=NEW.DATA,DCB=(DEN=3,RECFM=U,BLKSIZE=4000)
```

c) Writing an 800 bpi tape :

```
//OUT DD UNIT=TAPEDD,DISP=(NEW,KEEP),VOL=SER=ABCDEF,LABEL=(1,SL)  
// DSN=NEW.DATA,DCB=(DEN=2,RECFM=U,BLKSIZE=4000)  
  
or  
//OUT DD UNIT=TAPE800,DISP=(NEW,KEEP),VOL=SER=ABCDEF,LABEL=(1,SL)  
// DSN=NEW.DATA,DCB=(DEN=2,RECFM=U,BLKSIZE=4000)
```

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* OPERATIONS *

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GUIDELINES FOR TAPE PROCESSING

All academic users requiring tape processing must satisfy the following tape handling requirements before submitting jobs to MVT, or jobs will be cancelled by the Computer Operator when requested tape mounts on the Operator's Console have not been properly set up, and/or, are not immediately available for operator access:

1. Tapes to be processed by the computer must be available in the Computing Center's Academic Tape Library.
2. You must provide Dispatch (not the Computer Operator) with the proper tape handling information to get your tape(s) processed. For Example:
User Name; Job Name; Tape Volume Serial Number; Whether tape is for INPUT only, OUTPUT only, or for both INPUT and OUTPUT.

3. Tapes must be retrieved from the Academic Tape Library and setup according to user preference (WRITE RING/NO WRITE RING) and delivered to the Computer Operator by Dispatch Personnel.

PLEASE NOTE : When the Computer Operator responds to a tape mount request on the Console, it is assumed that proper setup for each tape has been completed by dispatch according to user preference for each particular job.

Tapes are considered reserved in the Academic Tape Library and available for setup after a particular tape has been logged in on the Academic Tape Log and then filed in the Academic Tape Library by Dispatch Personnel.

When it is inconvenient for you to personally provide the proper tape handling information to the Computing Center, you may phone Dispatch in Computer Operations (788-2324) and provide the proper information so that your tape(s) can be processed. Dispatch will then: (a) complete a Special Handling Card with the information you provide, (b) retrieve your tape(s) from the Academic Tape Library, (c) set tape(s) up for proper processing (WRITE RING or NO WRITE RING), and (d) deliver both the tape(s) and Special Handling Card to the Computer Operator.

After you have verified that your tape(s) have been set up properly and delivered to the Computer Operator, you may submit your job to MVT for normal processing.

READING DISK DATA SETS

It is advisable to use the file disposition "share" (DISP=SHR) when reading a disk data set. The reason for this is that if more than one job is trying to access the data set at the same time, a disposition of "old" will lock out all but the first job, and the other jobs will "bomb" with a system 222 error.

KNOW YOUR REPRESENTATIVE

The University Computing Council was established this past spring to function as an advisory body with respect to computing policies, services, physical facilities, and allocation of resources. It is a standing Council, and reports to a Steering Committee composed of: the Vice President for Fiscal Affairs, the Vice President for Academic Affairs, the Vice President for Administrative Affairs, and a Representative of the President of the Texas College of Osteopathic Medicine.

The Computing Council is concerned with both current policy matters and long-range planning. An emphasis is placed on policies and procedures to provide and maintain a balance between required computing services and the necessary funding, staff, and space commitments to meet these requirements. The equitable allocation of existing computing services is also of continuing concern.

Academic, administrative, and Computing Center representatives comprise the Computing Council, with the academic representatives serving the dual role of Council members and Academic Computing Coordinators for their respective colleges or schools. The duties of the Academic Computing Coordinators are listed below:

1. Developing, documenting, and updating school or college and departmental computing plans including current and future computing service requirements by course or project. These plans are used by

- the Council to determine and document University academic computing requirements.
2. Providing advice and assistance to faculty members in the use of computing services and software packages to promote effective and coordinated use of available computing services and facilities.
 3. Providing advice and assistance to the Computing Center staff in the development of user guides, software documentation, and seminars.
 4. Coordinating, assisting, and controlling departmental or faculty sub-allocations of resources such as terminal and on-line disk storage.
 5. Coordinating, assisting, and controlling departmental or faculty acquisition of computing equipment and software (including, microcomputers and word processing systems).
 6. Other duties as agreed within the Computing Council.

The administrative computing representatives are individuals who, because of their positions, are normally responsible for the development and coordination of major administrative computing information systems.

Other members of the Council include the Chairpersons of the Computer Science Department and the Accounting and Information Systems Department (ex-officio members); The Director of Computer Systems, the Manager of Academic Computing Services, and the Manager of Administrative Computing Services (all non-voting, ex-officio members); several additional members who have expertise otherwise not available on the Council.

It is particularly important that all members of the academic community be aware of their particular representative on the Council, so that any requests or questions that would be appropriate for the Council to consider can be heard. Following is a list of all Computing Council members :

Academic Computing Coordinators

Dr. Neal Tate, Chair, College of Arts and Sciences
Mr. Cengiz Capan, College of Business Administration
Dr. Tom Fairchild, School of Community Service
Dr. John Curry, College of Education and Home Economics
Dr. Robert B. Tolouse, Graduate School and Faculty Research
Dr. Don Cleveland, School of Library and Information Sciences
Dr. Larry Austin, School of Music
Dr. Jim Poirot, Department of Computer Sciences
Dr. Robert Zant, Department of Accounting and Information Systems
Mr. Vernie Sallee, TCOM

Administrative Computing Coordinators

Academic Affairs Systems

Ms. Francette Milligan, Admissions and Records
Mr. Melvin Gouge, Student Affairs and Financial Aid
Dr. Merv Stelter, Office of Planning and Analysis

Fiscal Affairs Systems

Mr. George Hardin, Payroll, Accounting, Purchasing, Budgets
Mr. James Terrell, Housing, Bookstore and Other Fiscal

Administrative Affairs and Other Systems

Mr. Steve Miller, Personnel, Physical Plant, Facilities, Advancement and Others

Medical Affairs Systems

Mr. Steven R. Russell, Business Manager, TCOM Administrative Systems

Other Representatives (Non-Voting)

Mr. Richard Harris, Director of Computer Systems
Dr. Tom Madron, Manager of Academic Computing Services
Mr. Coy Hoggard, Manager of Administrative Computing Services
Dr. Jim Mackey, Hardware Specialist - Physics Department
Dr. Larry Luce, Director of Facilities Planning & Utilization

* * * * *

* M U S I C *

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CAT: AN ADDITIONAL WAY TO BROWSE YOUR SAVE LIBRARY FILES

The CAT command, like the LIBRARY command, is used, primarily, to obtain an alphabetic list of names of files saved in the SAVE LIBRARY by the particular user. In addition to the parameters listed below, the CAT command contains some rather nifty features that enable an absent minded person to still get a listing of specific files. The general form of the CAT command is: CAT <SAVEfile> (any parameters)
The <SAVEfile> may be either an actual file name or a symbolic definition as described below.

A "." or a "," can be used in place of a file name in the CAT command to denote all of the files in the user's save library. For example: CAT . <or> CAT , will give you an alphabetic listing of all of the SAVE LIBRARY files saved under the ID you are logged on to. It is important to note that it is necessary for either a SAVEfile name, a ".", a ",", or one of the other symbols discussed in connection with searching on file names to be included immediately after the CAT command if any parameters are going to be used. This field is positional in nature and cannot be eliminated when parameters are in use.

An "*" will substitute for a single level of a file name so that: CAT * would give you all the one level files in your SAVE LIBRARY; CAT *.* would give you a list of all the two level names in your library; and so on. The command: CAT *.SPSS would give you all the two level file names in your library with SPSS as the second level name.

Perhaps the most useful of the "nifty features" of the CAT command is the ability to search for specific strings that appear anyplace in the SAVEfile name. This is accomplished by the use of a period (.) to delineate the string that is to be sought. For example: CAT .COB. would search for all the SAVEfile names that have the string COB in their name. The "." can also be used in much the same way the "*" is used, so that the command: CAT .COB would list all the SAVEfile names that have COB as the last three letters of the file name; CAT COB. would list all the SAVEfile names that have COB as the first three letters of the file name; CAT ..COB would list all the files that have COB as the last level of the file name; and CAT COB.. would list all the files that have COB as the first level of the file name.

Additionally, a "?" can be used as a substitute for any single letter, such that the command: CAT *.SP?? would give you all the two level file names in your SAVE LIBRARY that have a four letter second level name with the first two letters being SP.

Individuals who have supervisor privileges on their ID CODES (such as some professors might have) can get a listing of all the SAVE LIBRARY files that can be accessed under a certain supervisory ID code by typing

something like: CAT XY??:#. # where XY are the first two letters of the ID CODE and the ":" separates the ID field from the file name field. CAT will pad up to four characters on the ID CODE field, so that the "?" could actually be eliminated in the above case.

A set of parameters, separated by commas or blanks, may be used along with the CAT command, many of them similar to the parameters associated with the LIB command, these are:

S(filename):

Where "filename" is the name of the file that the output of the CAT <SAVEfile> S(filename) command is being sent to. This parameter saves the list of SAVE LIBRARY files to the filename specified. If just S is specified a file named @LIB will be created.

FULL or F :

Lists all the characteristics of the SAVE LIBRARY files.

PACK or P :

Lists the SAVE LIBRARY files in packed form.

TAG or T :

Prints out the tag information for each file. Does NOT imply FULL.

ERASE or E :

Places in a file called @LIB, a PURGE command for each file listed when CAT <SAVEfile> E is executed. This parameter would be most useful when used with some type of qualified file definition (EX: CAT ..COB). If the user did not wish to actually purge all the files captured by the above command, @LIB could be edited to include only those files that the user wanted to purge. This parameter is obviously handy for those people who have lots of SAVE LIBRARY files. This parameter, when used in conjunction with the S parameter can send the list of files to be purged to a user-designated file name. To actually PURGE those files, enter:

```
/INPUT
/INCLUDE EDITOR
/INCLUDE @LIB <or designated file name>
/ENDRUN
```

For a discussion of file naming conventions and the advantages of their use, see the January 1981 issue of BENCHMARKS, page 6.

#EXCHANGE: AN NEW MUSIC UTILITY TO ARCHIVE SAVE LIBRARY FILES

The #EXCHANGE utility program is designed to help MUSIC users to archive (dump) their MUSIC SAVE LIBRARY files to OS/MVT disk packs and/or tape, later restore the files with minimum effort, and free the space quota assigned to their IDCOCES for more frequently used programs. To read and/or print the documentation of this utility, simply type : #EXCHANGE.DOC

This utility can be accessed by entering the #EXCHANGE command at your terminal after you log on to MUSIC. Several questions will be prompted which should be answered carefully. Each prompt directs the user into the type of response expected to be received. Check points are built into the utility program to validate the accuracy of the responses.

Since this utility is a "What to do" not "How to do" program the following points must be taken into special consideration:

- 1- No blank is accepted as response to a prompt.
- 2- Abbreviated responses are not accepted unless directed by the

prompt.

- 3- Before your response to a prompt wait for question mark '?' which indicates the utility program is waiting for your response.
- 4- The logical record length (LRECL) of your files should not exceed 80 characters in length and BLKSIZE must be a multiple of LRECL.
 - LRECL= Logical RECOrd Length, number of bytes in each record.
 - BLKSIZE= BLock SIZE, number of records in each block, for efficiency, use factor of 20 or above (i.e. If LRECL=80 then BLKSIZE=1600).
 - RECFM= RECOding ForMat, if your file is stored as fixed compressed (FC) in your save library your response to this parameter should be fixed.

Your response to the above subparameters can be a semicolon ';' which indicates the following defaults:

LRECL=80 BLKSIZE=1600 RECFM='FB'

- 5- If you are going to dump your SAVE LIBRARY file to tape, refer to "A Guideline for Tape Handling" in this issue of BENCHMARKS for information on the proper procedure to follow.
- 6- If you are going to dump your SAVE LIBRARY file to an OS/MVT disk pack, use the OS/MVT naming conventions designed by the Computing Center for the OS/MVT data sets to secure the retention of your file on the requested disk pack as follows:

USERn.Dxxxx.Pyyyy.name

n = 1 for RESEARCH users.

n = 2 for INSTRUCTIONAL users.

xxxx = The first 4 digits of your 'OS' project number.

yyyy = The last 4 digits of your 'OS' project number.

name = max. 26 characters, every 8 characters separated by a period.

If you are using tape, the data set name need not follow the above naming convention.

- 7- Dumping SAVE LIBRARY files will not destroy your original file in MUSIC. Also the reverse situation, retrieving files from OS/MVT or tape will not destroy your original file on OS/MVT disk or tape.
- 8- If you want to save files and like to save your file information, before executing the utility, create an empty file through EDIT command (see the MUSIC Manual). When #EXCHANGE is executing, enter the name of the save library in response to the proper prompt for the name of your directory. This will log the data set name (DSN), logical record length (LRECL), blocksize (BLKSIZE), recording format (RECFM) of the file, volume serial number (VOL=SER), the sequence number and the tape density if tape is used, and time and date of creation of the file in your directory.

The directory needs to be created once, next time the new information is appended to the end of the directory. However if you delete any files which you have already saved on the OS/MVT disk pack, it is your responsibility to delete the deleted file log in the directory (if directory had been used at the time of the creation.)

- 9- Right after your response to the last prompt, your file name, time, and date is displayed at your terminal and the #EXCHANGE utility will be chained to OS job retrieval (OSJR) program. From this point any valid "OSJR" command can be entered to trace your job status (see the MUSIC Manual).

When the following message is displayed on your terminal,

JOB nnn jobname OUTPUT READY FOR MUSIC - nnLINES nnCARDS

Then the output is ready for your inspection. Enter the following command to check the accuracy of your job:

OUT JOB=nnn,DSID=ALL

(If there is only one job at a time 'JOB=nnn' can be omitted.)
If the output was error free take the following step which depends on the action requested in the #EXCHANGE utility program:

Action Requested	After Output Ready For MUSIC
-----	-----
SAVE ("S")	1- Check the accuracy of the output. 2- If no error was detected write down the information about the file which you created (if your directory was not used) Then purge the job (PURGE JOB=nnn), and enter END. 3- If an error was detected purge the job (PURGE JOB=nnn), enter END, and execute the #EXCHANGE Utility and answer the questions more carefully.
RETRIEVE ("R")	1- Check the accuracy of the output. 2- If no error was detected the card image of your OS/MVT file retrieved should be displayed on your terminal screen. (Since the requested file is punched to your terminal it might look discontinuous. This is not an error when you save it, it will be okay.); then save the card images in your MUSIC save library as follows: OUT JOB=nnn,DSID=PUN,FILE=a name You should receive the following message: OUTPUT COPIED Then purge the job (PURGE JOB=nnn) or if punched output is desired route your job to be punched as follows: ROUTE JOB=nnn,TO='SPECIAL' Then enter END. Do not forget the "special handling card" for the punched output.
DELETE ("D") OS/MVT data set only	3- If any error was detected purge the job, enter END and execute #EXCHANGE. 1- Check the accuracy of the output. 2- If no error was detected your file has been deleted (usually the output indicates DELETED in front of the file name). Then purge the job (PURGE JOB=nnn), and enter END. 3- If you should get NOT DELETED 8 in front of the file name, it indicates the data set was not found on the given disk pack. PURGE the job, enter END , execute #EXCHANGE utility again with correct information.

When you make sure that your MUSIC SAVE LIBRARY file is saved on an OS/MVT disk pack or tape it is your responsibility to

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purge the saved file that you already dumped from your MUSIC library to free the space for future use.

If you have any questions please call Academic Computing at the Computing Center (817 - 788-2324), or send a message to the 'SYSTEM' while logged on to MUSIC (enter 'HELP MAIL' or see the June 1981 issue of BENCHMARKS for more information on the electronic mailing system).

MUSIC NOTES

1. A new version of MUSIC is now up and running - MUSIC Version 5. For a detailed description of Version 5, see the September, 1981 issue of BENCHMARKS, page 5.
2. The Version 5 MUSIC Manuals are on sale in the University Store for \$8.75 as is the SCRIPT Manual, for \$3.35. Pocket cards are available for \$.50 a piece. Each of the above items are also available to departments through Office Supply.
3. The new MUSIC Manual references, on page 329, an example of an APL character set. There is no example. Hopefully, an example will be furnished sometime in the near future.
4. MUSIC Version 5, because of its many enhancements - for example the restart feature for an edit session, writes files which take up space on user ID's and appear as members in SAVE LIBRARIES with an @ in front of the name. If this becomes a problem, i.e. lack of space, these files can be purged by the user. This should be done with a fair amount of caution, however, lest the user end up losing something (s)he really wanted to keep. For example: if you PURGE your @MAIL file and you had unread mail, you would lose it. The @ELOG file could be PURGED if a normal termination of an edit session occurred. (See page 186 of the MUSIC Manual for more information about the EDIT LOG).
5. When using SCRIPT, if you request your output be directed to a SAVE LIBRARY file rather than the terminal, the following occurs:
 1. If the /FILE card is for Unit 6, SCRIPT operates correctly.
 2. If the /FILE is for any other unit, then only the first eighty bytes of the output line are placed in the file.
6. The following terminal types are currently supported: TTY
LA36 ACTV MIME ADM3A TI745 TI735 TRS80II TRS80III LA120 DIAB

ACCESSING THE INTERACTIVE COMPUTING SYSTEMS

The HP-2000 and MUSIC may be accessed through terminals at the following locations. All terminals are dial-ups unless otherwise noted, and as such can be used to access either the HP-2000 or the AS/5000 computers. To access the HP-2000, dial either 788-2771 or 566-4736. The AS/5000 may be accessed through MUSIC by dialing 566-1222.

BA 153:	3 CRT's, 6 DEC LA36's, 16 CRT's HARDWIRED to the AS/5000
ISB 135:	2 CRT's HARDWIRED to the HP-2000
ISB 229:	1 Diablo D1620
WH 173:	2 CRT's, 2 DEC LA36's (8am-5pm)
WH 131:	2 CRT's, 1 DEC LA36 (8am-5pm)
GAB:	Media Library - 12 CRT's HARDWIRED to the AS/5000
GAB 333:	1 DEC LA36, 3 DEC LA120's HARDWIRED to the AS/5000
MU 1007:	1 CRT, 1 DEC LA36, 8 CRT's Hardwired to the HP-2000 (by appointment)
MU 2011:	3 CRT's 1 DEC LA36

COMPUTER ASSISTED INSTRUCTION ON SAS

A computer assisted instruction module is available on MUSIC through IIS for SAS. This module is designed to teach new users with limited computer and/or statistical expertise about SAS (Statistical Analysis System), and was acquired from the University of South Carolina.

To access this module it is necessary to :

- a. Get a MUSIC ID - available from the Computing Center.
- b. Sign-On to MUSIC on a HARDCOPY TERMINAL and enter: SAS1.BOOKLET
At this point, the system will respond :
MUSIC/SCRIPT. . .ENTER OPTIONS OR 'HELP'
Press the <RETURN> or <ENTER> key and continue printing the booklet.
- c. Sign-off of MUSIC on the hardcopy terminal and sign on at a CRT.
After logging on, enter: SAS1.LEARN
Then enter: STUDENT/SAS1
At this point you are in the SAS1 course, where further instructions will be given.

```

* * * * *
*
*          SPSS          *
*
* * * * *

```

KNOWN ERRORS IN SPSS RELEASE 9

The following list contains all of the known errors, so far, in Release 9 of SPSS (the version currently running at NT). Any errors that were documented for a previous version and are not listed here have been fixed.

While reading input data, if there are multiple records per case and the last case is short a record, there is no error message, but the last case is dropped.

BREAKDOWN :

1. Option 2 (Exclude cases with missing values on the dependent variable) does not work for CROSSBREAK. Cases with missing values on the dependent variable are included in the calculation of statistics.
2. In integer mode - if a huge problem is specified, the workspace calculation overflows and generates an IBM system error OC4.
3. For CROSSBREAK, there is a maximum of 200 non-empty rows and 200 non-empty columns allowed. If these maxima are exceeded, a non-fatal message is printed and processing continues.

CANCORR :

1. For moderately large problems, there may be an incorrect calculation of canonical variate scores and occasional overflows.

COMPUTE and IF :

1. An expression of the form $Y - 2 ** Z$ is parsed incorrectly as $Y + (-2) ** Z$. The result is correct if Z is odd, but incorrect if Z is even. Only expressions exactly like this are affected : those where a constant to a power are subtracted from a variable or an expression. Use parentheses to force correct parsing: $Y - (2 ** Z)$.
2. Just COMPUTE - An expression of the form $A/(200*.*B)$ does not produce an error.

CROSSTABS :

1. Option 7 produces incorrect page numbering.
2. General mode - if the last table requested is empty, no message is printed.

ISCRIMINANT :

1. Occasionally two different scales are used for the territorial map and the scatter plots.

DOCUMENT :

1. If two files with documents are merged, the document text from the second file seems to disappear.

EDIT :

1. No warning is issued about too many variables.

MANOVA :

1. Plotting routines may produce extra headers. Setting PAGESIZE to something larger than the default 55 and less than or equal to the actual number of lines that fit on your printer paper seems to help.

MULT RESPONSE :

1. All reported frequencies have minima of 1.
2. Contains no check for alphanumeric variables.

NEW REGRESSION :

1. The following are null operations in NEW REGRESSION, but no warning message is produced. Instead, the request is ignored: Residuals keyword ID specified without a variable name; Residuals subcommand SCATTERPLOT with no pairs of variables specified; Residuals subcommand SAVE with no keywords specified.

NPAR TESTS :

1. For all tests - if all of the variables used have ranges of missing values (no variable has just one missing value), Option 1 may be forced on by mistake.

ONEWAY :

1. If more than 50 groups are specified, all sorts of things go wrong.

PRINT BACK :

1. A PRINT BACK command immediately preceding a LIST CASES causes a spurious LIST CASES error.

RELIABILITY :

1. Friedman's test (Option 15) cannot be computed by the default computing method because that code skips scales with zero variance, which occur whenever the data are ranks. When Option 15 is selected, Option 14 should be selected as well, to force the alternative computing method.
2. Method 2 (covariance matrix method) attempts division by zero if Statistic 9 (item-total statistics) is requested and a variable has no variance or the scale has no variance with the item deleted.

REPORT :

1. If a string variable is used as a break and the break column width is forced to be less than the string width, the BREAK breaks on every case prematurely, even if the string value has not changed.

SAVE ARCHIVE or LIST ARCHINFO :

1. Will fail if DOCUMENT precedes GET ARCHIVE in the run.

SORT CASES :

1. Will attempt to sort after an error in file definition, generating error 1778 on FT02.

VALUE LABELS :

1. If a variable name is omitted on the VALUE LABELS card, the value labels of the missing variable destroy the value labels of the previously defined variable instead of generating a syntax error.

WRITE FILEINFO and LIST FILEINFO

1. Both commands produce incorrect N OF CASES values if they are the first procedure and if N OF CASES is UNKNOWN.

It is important that any suspected errors in SPSS (incorrect calculations, "funny" output, etc.) be reported to the SPSS Coordinator here at the Computing Center (Claudia Putnam), since that is one of the primary ways that SPSS has of identifying possible bugs in their procedures.

SPSS STATISTICAL ALGORITHMS AVAILABLE

A copy of the SPSS Statistical Algorithms Manual is available for inspection from either Claudia Putnam or George Morrow in the Computing Center. This manual contains information about the actual computational procedures and statistical algorithms used in the various SPSS procedures. This manual is up-to-date as of Release 8, and comes complete with bibliographic listings.

CHANGE IN REGION AND PARAMETER SPECIFICATIONS

Release 9 of SPSS has larger default REGION and PARM parameters than the previous releases had. In previous versions the default PARM was 70 (PARM='70K') and the REGION was 234 (REGION=234K). Currently, the default specifications of these two parameters are: PARM='80K', REGION=276K. Should it be necessary to manipulate both of these parameters, one should make sure that the REGION is at least 196K bytes larger than the PARM that is specified (276-80=196). Failure to do this will result in some type of system error, stating, in effect, that there is not enough space for SPSS to operate. (For more information on the whys and wherefores of the REGION and PARM specifications for SPSS consult the SPSS Manual - the maroon one, page 588).

COOKING WITH CANNED PROGRAMS : A GUIDE TO INSTRUCTION IN THE STAT PACKS

This article represents a continuing list of classes offered throughout the campus which focus or at least touch on the use of the various statistical packages (SPSS, SAS, OSIRIS, BMD to name a few) available to researchers these days. Armed with this information, it is hoped that the would-be computer resource user can point him/herself in the direction that most fits his/her needs with regard to research methods.

<u>CLASS</u>	<u>DEPARTMENT</u>	<u>SEMESTER</u>	<u>REQUIREMENTS</u>	<u>OTHER INFO.</u>
EDUC 555	Education	Each Fall	None	Emphasis on collection & coding of data - SPSS & SAS.
EDER 624	Education	Each Summer	None	Emphasis on SPSS & SAS; collection & organization of data.

<u>CLASS</u>	<u>DEPARTMENT</u>	<u>SEMESTER</u>	<u>REQUIREMENTS</u>	<u>OTHER INFO.</u>
Applications f Quantative Procedures to Physical Education	Physical Education	Each Spring	None	Statistical analysis procedures for P.E. data with computer applications - use SPSS.
PSCI 410	Political Science	Spring(82)	PSCI 204 & 205	Political Parties - SPSS used in data analysis.
Computer Applications	Geography	Spring(82)	None	Introduction to FORTRAN and Basic Computer Cartography - SYMAR, ALTERN & various stat. packages.
SOC 526	Sociology	Every 3rd semester - next in the Fall 1982	None	Introduction to SPSS, SAS, MUSIC.
PSCI 632	Political Science	Spring(82)	Grad. standing	Research design & quantitative methods in Political Science - uses SPSS, OSIRIS, possibly SAS.
PSCI 553	Political Science	Fall, Spring	Grad. standing	Gathering, processing, interpreting data for administrative decision making - uses IDA on the HP-may use SPSS, MUSIC .
PSCI 438	Political Science	Spring irregularly	3 hrs. of Political Science	Laboratory exercises and data analysis to develop research skills - probably use SPSS.

<u>CLASS</u>	<u>DEPARTMENT</u>	<u>SEMESTER</u>	<u>REQUIREMENTS</u>	<u>OTHER INFO.</u>
PSCI 600	Political Science	Spring(82)	Knowledge of stat. through elementary regression; know a stat. package.	Least squares methods, factor analysis, multi-dimensional scaling, log-linear models - uses SPSS, SAS, OSIRIS, & ECTA.
SOC 521	Sociology	Spring(82)	Soci. 385 or equivalent (intro. stat)	This is a Non-parametric stat class - will use SPSS.
Bio 601	Biology	Spring(82)	Grad. student	Introduction to the use of SAS, SAS as a dynamic, multi-purpose system.
Biometrics	Biology	Each Fall	Grad. student or special permission.	Intro to Stat applications for biological research - use SPSS, SAS, NTSU STAT PAK & BMD.
Quantitative Methods in Geography	Geography	Spring(82)	Math 168 or equivalent.	Application of statistical techniques and mathematical models to spatial analysis - use various stat. paks.
Research Methods in Mass Communications	Journalism	Spring, Summer(82)	none	How to conduct research using statistics - use SPSS .
SPDR 515	Speech Communication and Drama	Each Fall	Graduate Standing - Some statistics	Communication Research Methods - use SPSS, SAS.
SPDR 511	Speech Communication and Drama	Each Spring	Graduate Standing - At least 1 statistics course	Communication Theory - Simulations and Research - use NT Statpak, SAS, SPSS, OSIRIS, GALILEO, CATIG.

<u>CLASS</u>	<u>DEPARTMENT</u>	<u>SEMESTER</u>	<u>REQUIREMENTS</u>	<u>OTHER INFO.</u>
SPDR 518	Speech Communication and Drama	Each Spring	SPDR 511, 515	Organizational Communication - use CATIG, GALILEO, OSIRIS, BELL LABS pgms.
SPDR 555	Speech Communication and Drama	Each Fall	Graduate Standing	Seminar in Interpersonal Communication - use SPSS.
SPDR 578	Speech Communication and Drama	Each Spring & Fall	Graduate Standing	Speech Pathology - Diagnostics - use MUSIC STATPAK.
SPDR 555	Speech Communication and Drama	Summer I	Graduate Standing	Normal Language Development - use MUSIC STATPAK.
SPDR 565	Speech Communication and Drama	Each Fall	Graduate Standing	Use SPSS for psychophysical measurement.
SPDR 465	Speech Communication and Drama	Unknown	None	Management of Persuasion - possibly use SPSS.

FOOD FOR THOUGHT: THE PARABLE OF THE '67 CHEVY*

Once upon a time there was a man who wanted to be able to get from New York to Los Angeles on 12 hours' notice. His means of transportation was a 1967 Chevrolet that had bald tires and fired on three cylinders.

Recognizing the deficiencies of his means, he had the car tuned up and bought new tires, a supercharger and a radar detector. Performance improved 87 per cent, but he still couldn't get from New York to L.A. in 12 hours.

He next put in a Cadillac engine and added streamlining; still not fast enough. His last gasp was to install a turbine engine and aerodynamic controls, which got him to 200 m.p.h. on the interstates - within reach of what he needed - but led to bad scenes going through the small towns.

When last heard of, he was complaining about problems with his turbine engine and small-town police; he had not realized that he was trying to improve the performance of a basically wrong means of transportation.

He was also asking what caused contrails and, when told about jet planes, said, "They'll never fly!"

Morals:

1. If you're using the wrong tool, improving its performance won't help much.

2. The people who know the most about existing tools are often the hardest to get to accept better and different ones.

3. The development of new tools seldom makes the existing ones

totally obsolete. Even if our man had accepted jet airplanes, he would still have needed his car for getting to the grocery store.

*Taken from Computerworld/EXTRA! - "Software in the 80's Perils & Promises" by Daniel D. McCracken

SOFTWARE - WHAT WE HAVE AND WHAT WE SUPPORT

The following table is a "Software Support Key" designed to inform users of the level of support the Computing Center offers for maintenance, documentation, and consultation with regard to the software available on the AS/5000 and the HP-2000. The tables that follow this key table refer to the software available on each machine.

Software Support Key**

	FULL(F)	PART AL(P)	Minimal(M)	None(N)
Maintenance (MT)	a. New versions with major improvements installed as soon as possible b. Bugs fixed by CCTR staff or reported to vendor as soon as possible. c. Vendor committed to fixing bugs.	a. New versions with major improvements installed as staff is available. b. Known errors may exist. c. Vendor may not be committed to fixing bugs.	a. New versions if available installed if no major modifications are required. b. Known errors may remain. c. No guarantee of support from vendor	No Maintenance
Documentation (D)	Full documentation from vendor or local source.	Documentation from vendor or local source may be inaccurate or incomplete.	Local documentation only on access. Other documentation may be available.	No new documentation.
Consultation (C)	Consultants familiar with use and problems of processor.	Consultants have information on access, but more than that depends upon available staff.	Consultants have information on access only	No consulting help

**Letters in parenthesis denote abbreviations for each category.

AS/5000 SOFTWARE

Operating System	Processor/Library	Support (MT) (D) (C)			Source	Comment
(Release 21.8F Operating System)	HASP	F	F	F	IBM/NAS	Version 4.1 (spooling processor)
	CICS	F	F	F	IBM	Version 2.3 (Teleprocessing Monitor)
	FORTTRAN IV	P	F	F	IBM	Version G
	FORTTRAN IV	P	F	F	IBM	Version H
	FORTTRAN IV	F	F	F	IBM	Version G1
	WATFIV	P	P	F	University of Waterloo	In-core FORTRAN Lang. Translator
	COBOL	P	F	F	IBM	ANS Version 2
	COBOL	P	F	F	IBM	ANS Version 4
	WATBOL	F	F	F	University of Waterloo	In-core ANS COBOL Language Translator
	PL/I	P	F	F	IBM	Version F
	PL/I	F	F	F	IBM	Optimizing Compiler
	PL/C	P	F	F	Cornell University	In-core PL/I Lang. Trans.
	FORMAC	P	F	M	IBM Employee Contributed	PL/I F Superset
	ASSEMBLER	P	F	F	IBM	Version F
	ALGOL	P	F	P	IBM	Version F
	RPG	P	F	P	IBM	360 Version
	GPSS	P	F	M	IBM	360 Version
	SIMSCRIPT	F	F	M	Consolidated Analysis	Version II.5
	SNOBOL	P	F	P	Bell Telephone	Version 4
	SPITBOL	P	F	P	Illinois Inst. of Technology	In-core SNOBOL4 Lang. Translator
	NTSU STATPAK	F	F	F	NTSU	
	SPSS	F	F	F	SPSS Inc.	Release 9
	SAS	F	F	F	SAS Institute Inc	Release 79.5
	ETS	F	F	F	SAS institute Inc.	SAS Econometric & Time Series Library
	OSIRIS	P	F	P	University of Michigan	Version III
	BMD	N	P	P	UCLA	
	Misc. Prog. Library	F	F	F	NTSU	
	Misc. Sub-Routines	F	F	F	NTSU	
	OS Utilities	P	F	F	IBM	
	CASORT	F	F	F	Computer Assoc.	
	User Library	N	N	N	NTSU users	Programs which could benefit others.
	Scientific Library	N	F	P	IBM	Use is not recommended.

Operating System	Processor/ Library	Support			Source	Comment
		(MT)	(D)	(C)		
OS/MVT	FORMAT	P	F	M	IBM/Stanford	Release 5
MUSIC	FORTRAN IV ✓	F	F	F	IBM	Version G1
(Mc Gill University System for Interactive Computing)	COBOL ✓	P	F	F	IBM	ANS Version 4
	WATBOL	F	F	F	University of Waterloo	In-core ANS COBOL Language Translator
	PASCAL	P	P	P	McGill/Stanford	
	VS ASSEMBLER ✓	F	F	F	McGill/IBM	
	VS BASIC ✓	F	F	F	McGill/IBM	
	APL ✓	P	P	P	McGill/IBM	
	STATPAK	F	F	F	McGill	
	IIS	F	F	F	McGill/IBM	CAI Package
	TEACH	M	F	P	Maricopa Com Col	CAI Package
	TESTER	M	F	P	Maricopa Com Col	Test Generator
	MAIL	M	F	F	Maricopa Com Col	Electronic Mailing System
	CALCOMP Plotting Routines	M	F	P	CALCOMP	
VM/370 (Virtual Machine Operating System)	PLI ↑					
CMS						

HP-20000

Processor/Library	Support			Source	Comment
	(MT)	(D)	(C)		
SPSSHP	N	F	P	DePaul Univ.	
BASIC	N	F	F	Hewlett Packard	
EDITOR	M	F	P	Hewlett Packard	
FCOPY	M	F	P	Hewlett Packard	File Copy Utility
CAI	M	F	M	Hewlett Packard	
FINDIT	P	F	P	Hewlett Packard	File Processing
SYSPDS	P	F	P	NTSU	Word Processing
HP Contributed Lib	M	F	N	HP Users	
A900-Pseudo Lib	N	F	N	NTSU Users	
CALCOMP Plotting Routines	M	F	P	CALCOMP	

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REGISTRATION FORM FOR COMPUTING CENTER SHORT COURSES

Please complete this form and return it IMMEDIATELY if you wish to attend any of the short courses announced in this issue.

NAME : _____

PHONE : _____

I wish to attend :

Introduction to MUSIC ____

Introduction to SPSS ____

Introduction to SAS ____

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